FIG. 1

FIG. 2(a)

FIG. 2(b)

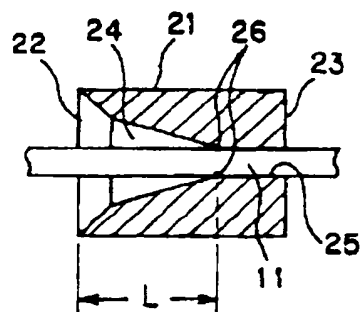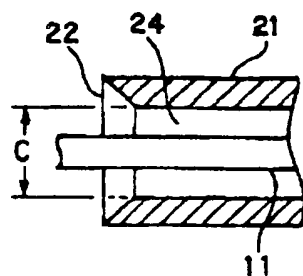# FIG. 2(c)

FIG. 2(d)
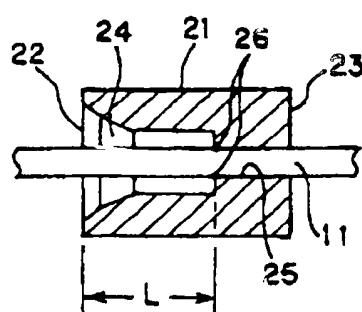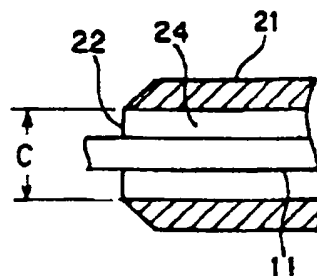
FIG. 3(a)

FIG. 3(b)

FIG. 3(c)
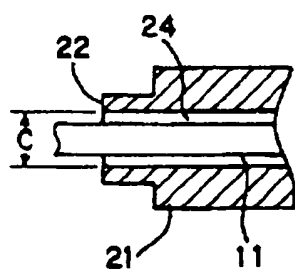
FIG. 3(d)
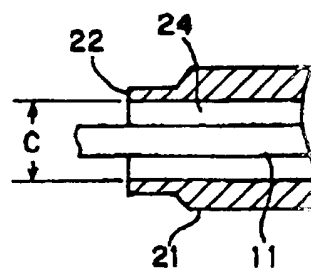
FIG. 3(e)
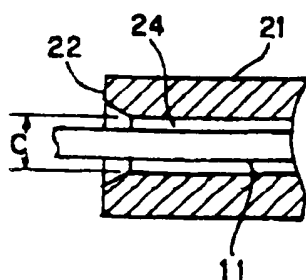
FIG. 4

SiO$_2$ - Mo Mixture	Mo content (Vol%)	Thickness of layer (mm)
1st layer	0	11.5
2nd layer	0.6	2.5
3rd layer	1.1	2.5
4th layer	2.3	2.5
5th layer	3.7	2
6th layer	5.1	2
7th layer	8.5	2
8th layer	13	2
9th layer	21	3.5
10th layer	29	3.5
11th layer	39	5.5
12th layer	55	10.5

FIG. 5

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Load (10kg)

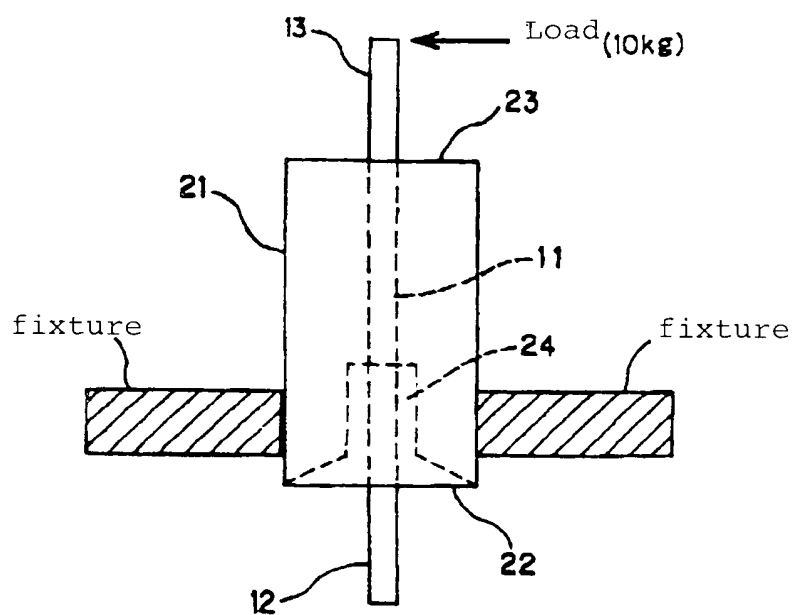23

21

11

fixture

fixture

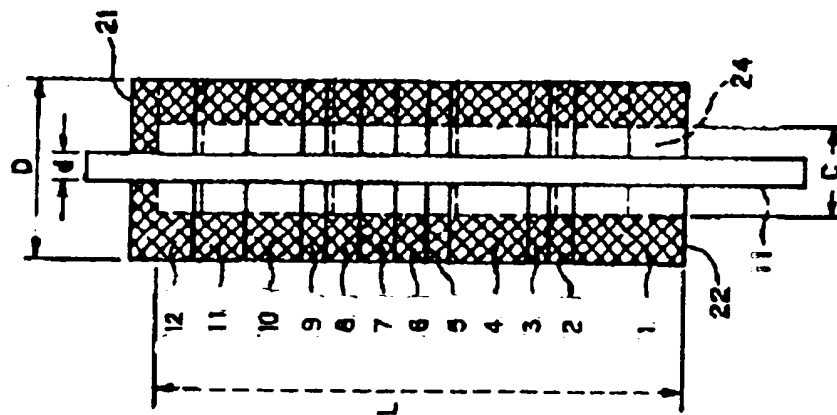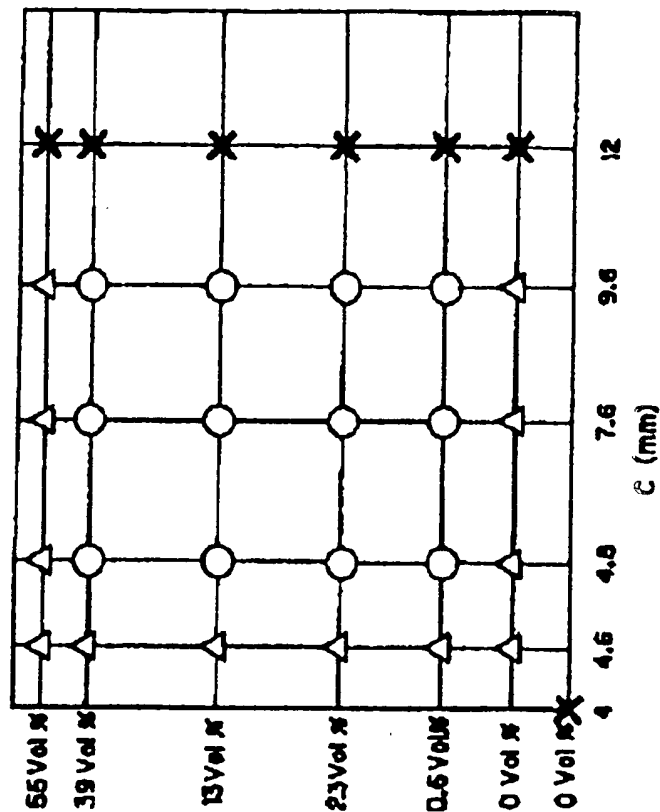24

22

12

FIG. 6(a)

FIG. 6(b)

FIG. 7

	Diameter D (mm) of functionally gradient material	Diameter d (mm) of lead bar	Proportion (Vol%) of conductive component at point of attachment	Hole diameter C (mm)	Evaluation
Implementation 2	7	2	39	2.7	○
Implementation 3	7	3	39	3.8	○
Implementation 4	11	3	13	6.5	○
Implementation 5	11	3	39	6.5	○